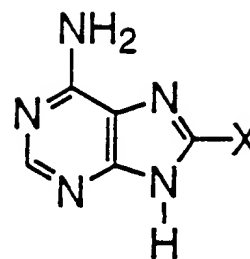
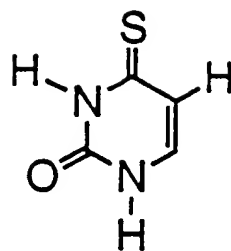
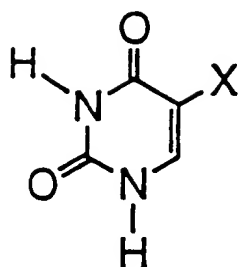


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X=Br, 5-bromouracil

X=I, 5-iodouracil

X=N<sub>3</sub>, 5-azidouracil

4-thiouracil

X=N<sub>3</sub>, 8-azidoadenine

X=Br, 8-bromoadenine

FIG. 1

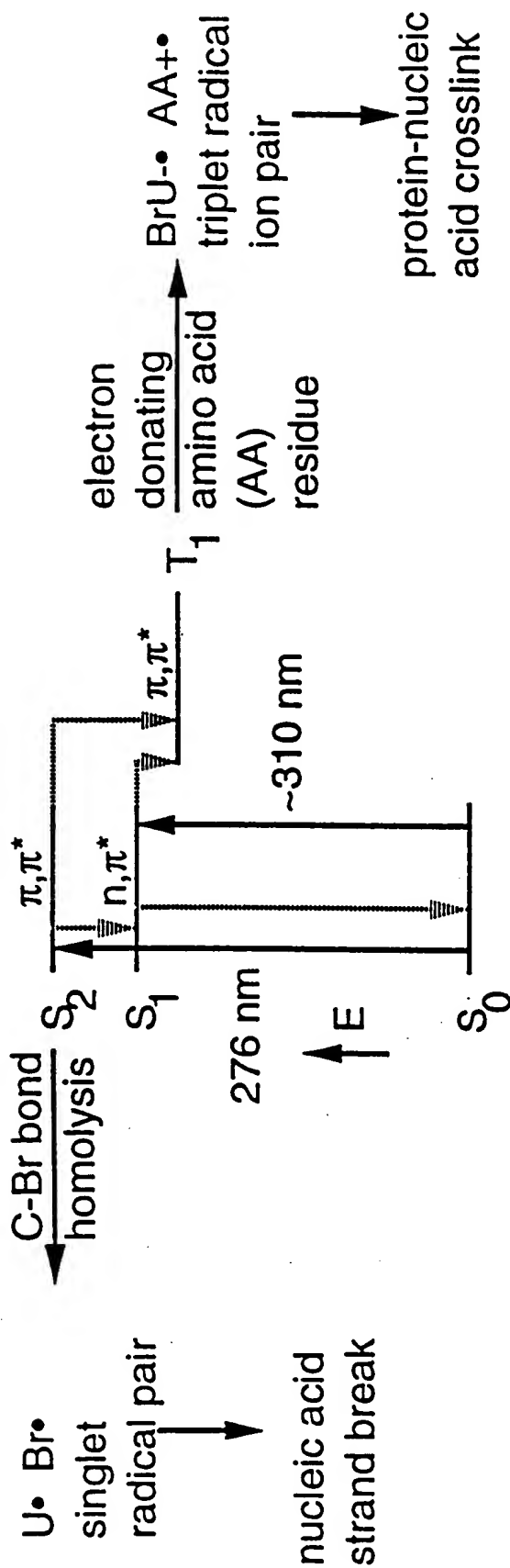


FIG. 2

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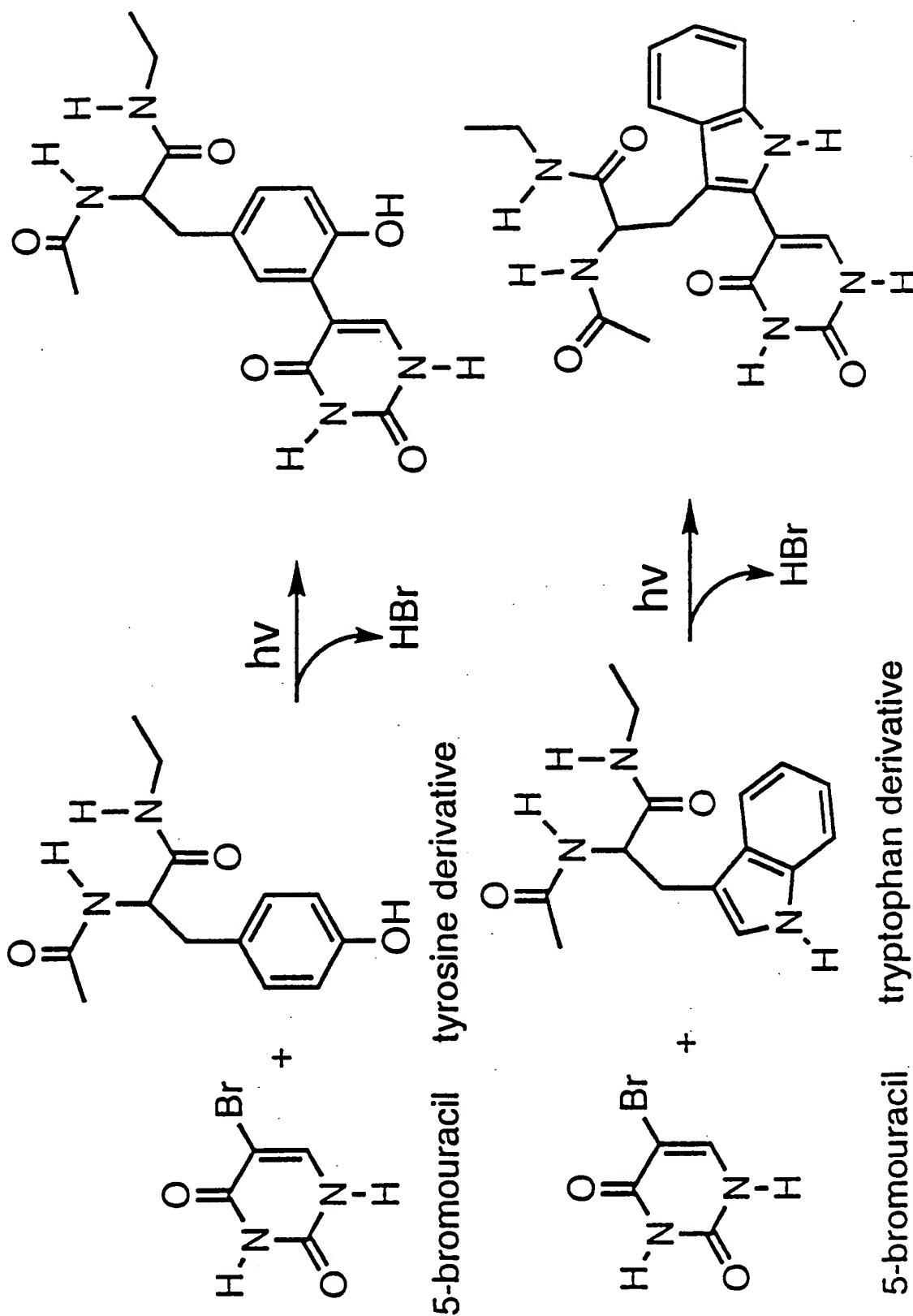


FIG. 3

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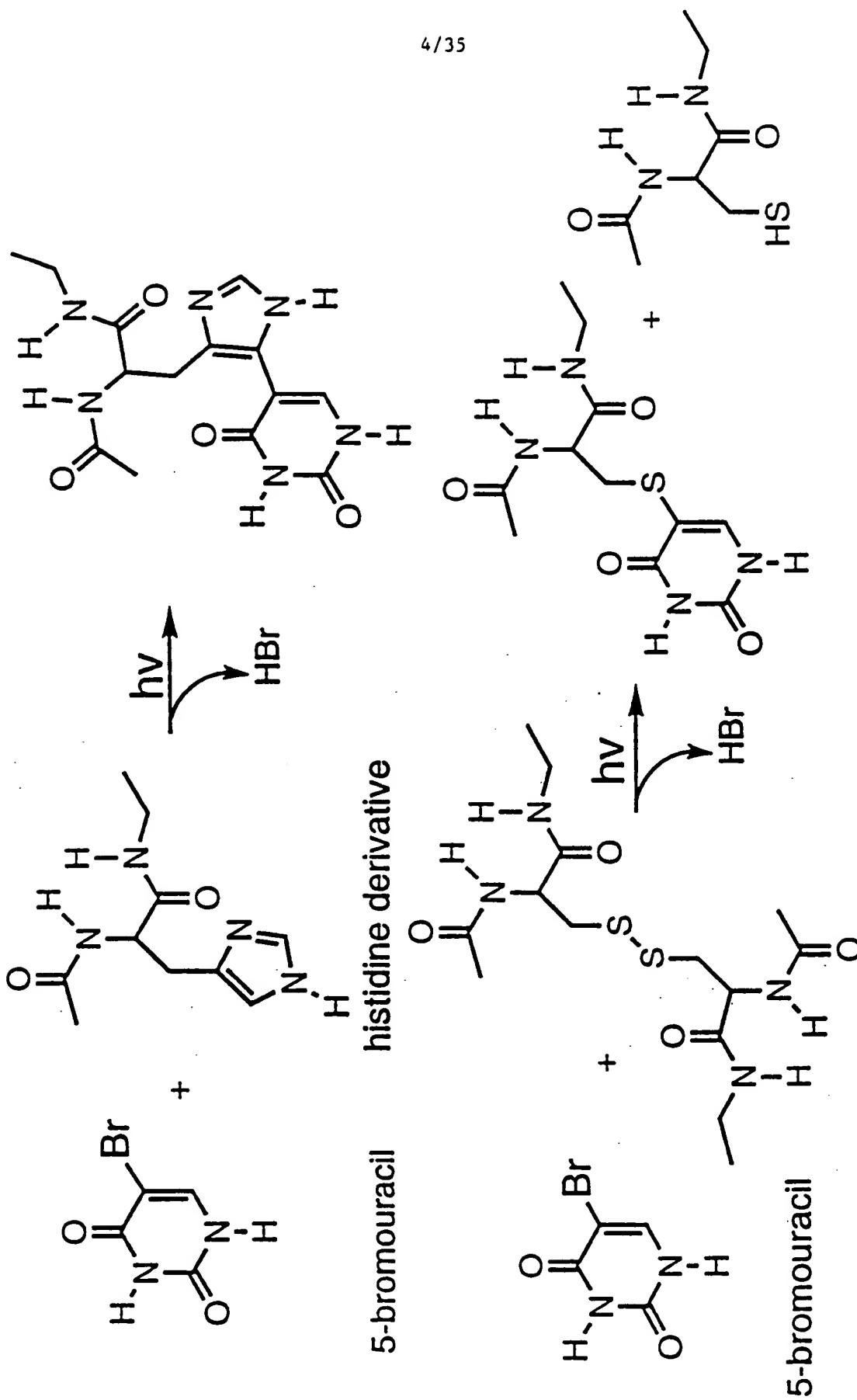


FIG. 3 (CONT'D)

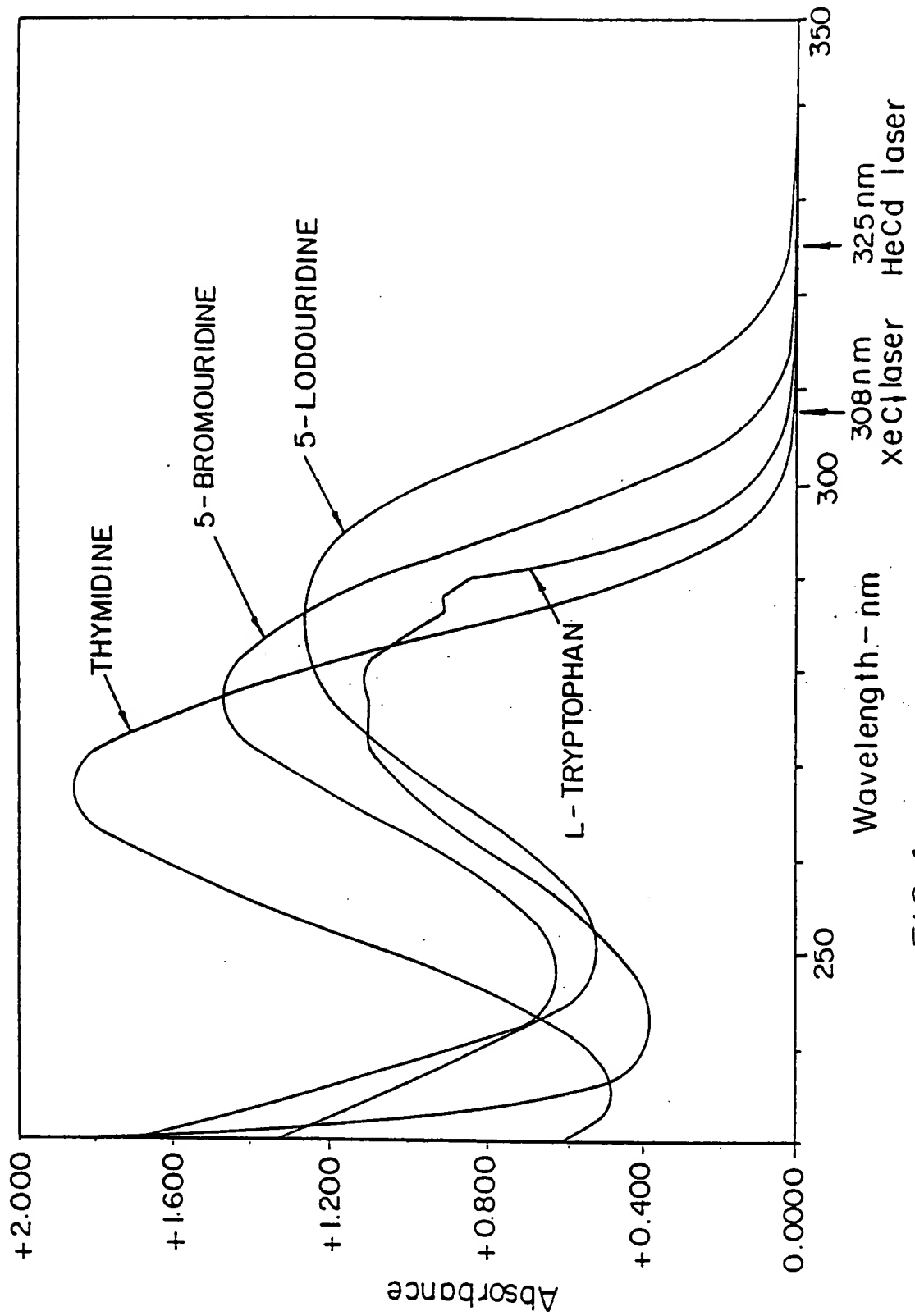
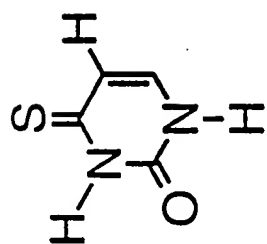
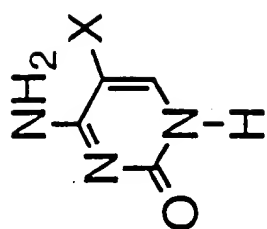
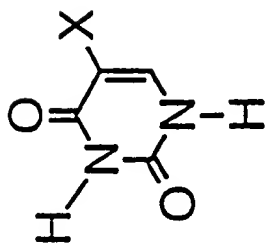


FIG. 4



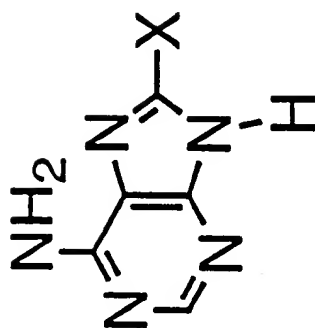
4-thiouracil



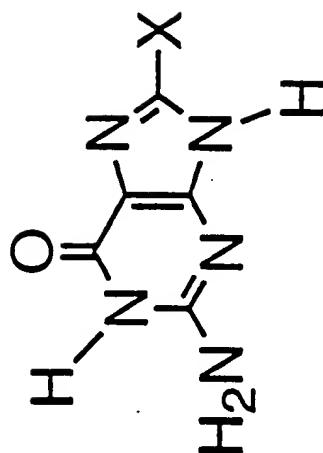
X=Br, 5-bromouracil  
 X=I, 5-iodouracil  
 X=CH<sub>2</sub>=CHBr, bromovinyluracil  
 X=CH<sub>2</sub>=CHI, iodovinyluracil  
 X=N<sub>3</sub>, 5-azidouracil

X=Br, 5-bromocytosine  
 X=I, 5-iodocytosine  
 X=CH<sub>2</sub>=CHBr, bromovinylcytosine  
 X=CH<sub>2</sub>=CHI, iodovinylcytosine  
 X=N<sub>3</sub>, 5-azidocytosine

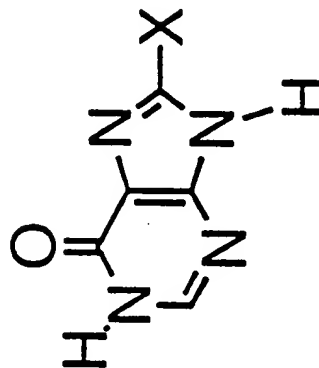
FIG. 5



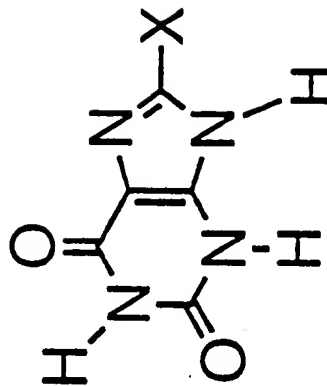
X=N<sub>3</sub>, 8-azidoadenine  
X=Br, 8-bromoadenine  
X=I, 8-iodoadenine



X=N<sub>3</sub>, 8-azidoguanine  
X=Br, 8-bromoguanine  
X=I, 8-iodoguanine



X=N<sub>3</sub>, 8-azidohypoxanthine  
X=Br, 8-bromohypoxanthine  
X=I, 8-iodohypoxanthine



X=N<sub>3</sub>, 8-azidoxanthine  
X=Br, 8-bromoxanthine  
X=I, 8-iodoxanthine

FIG. 5 (CONT'D)

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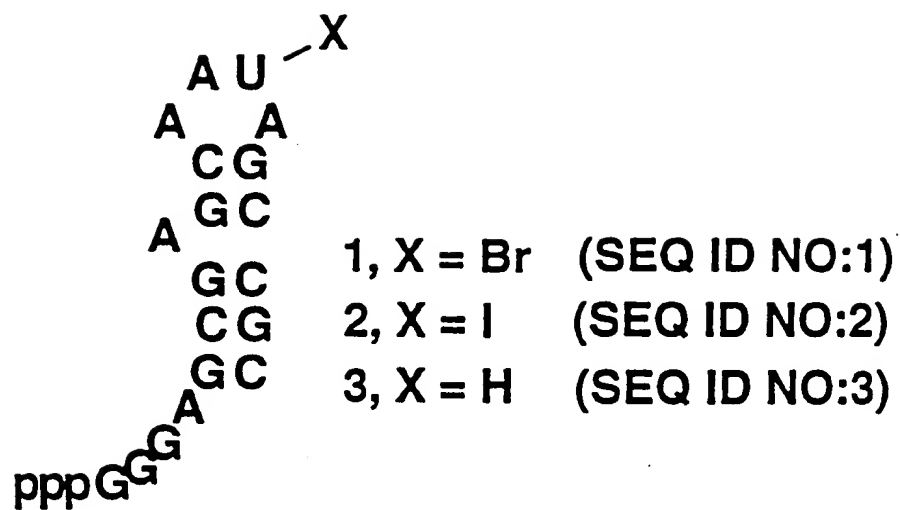


FIG. 6



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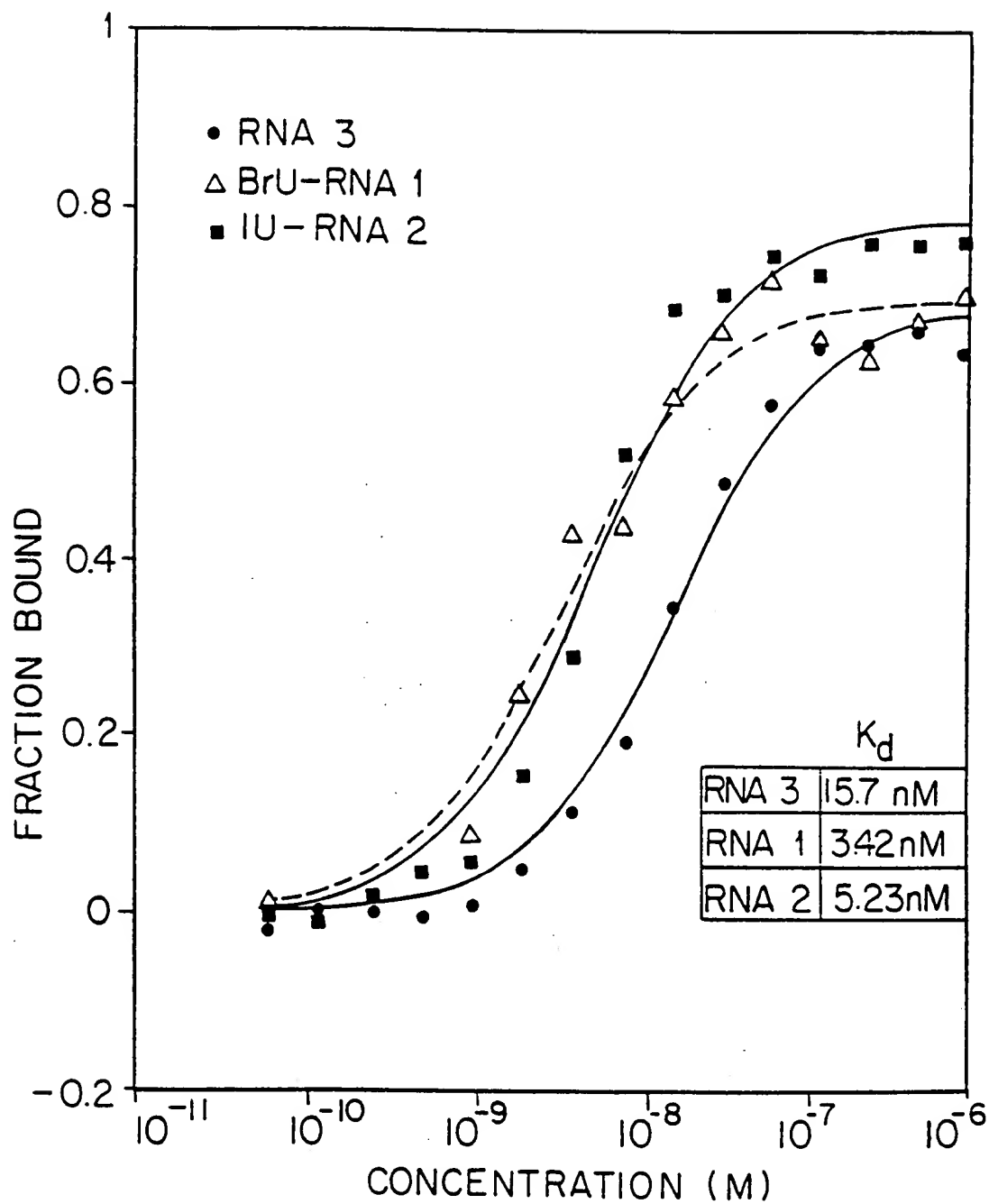


FIG. 7

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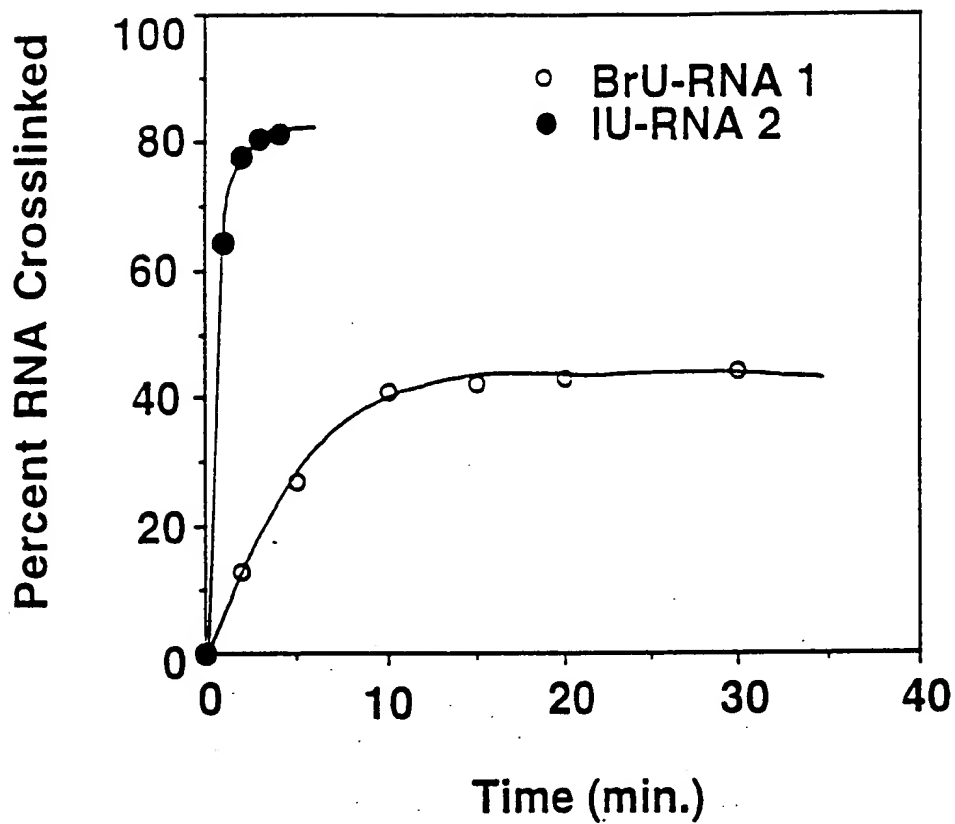


FIG. 8

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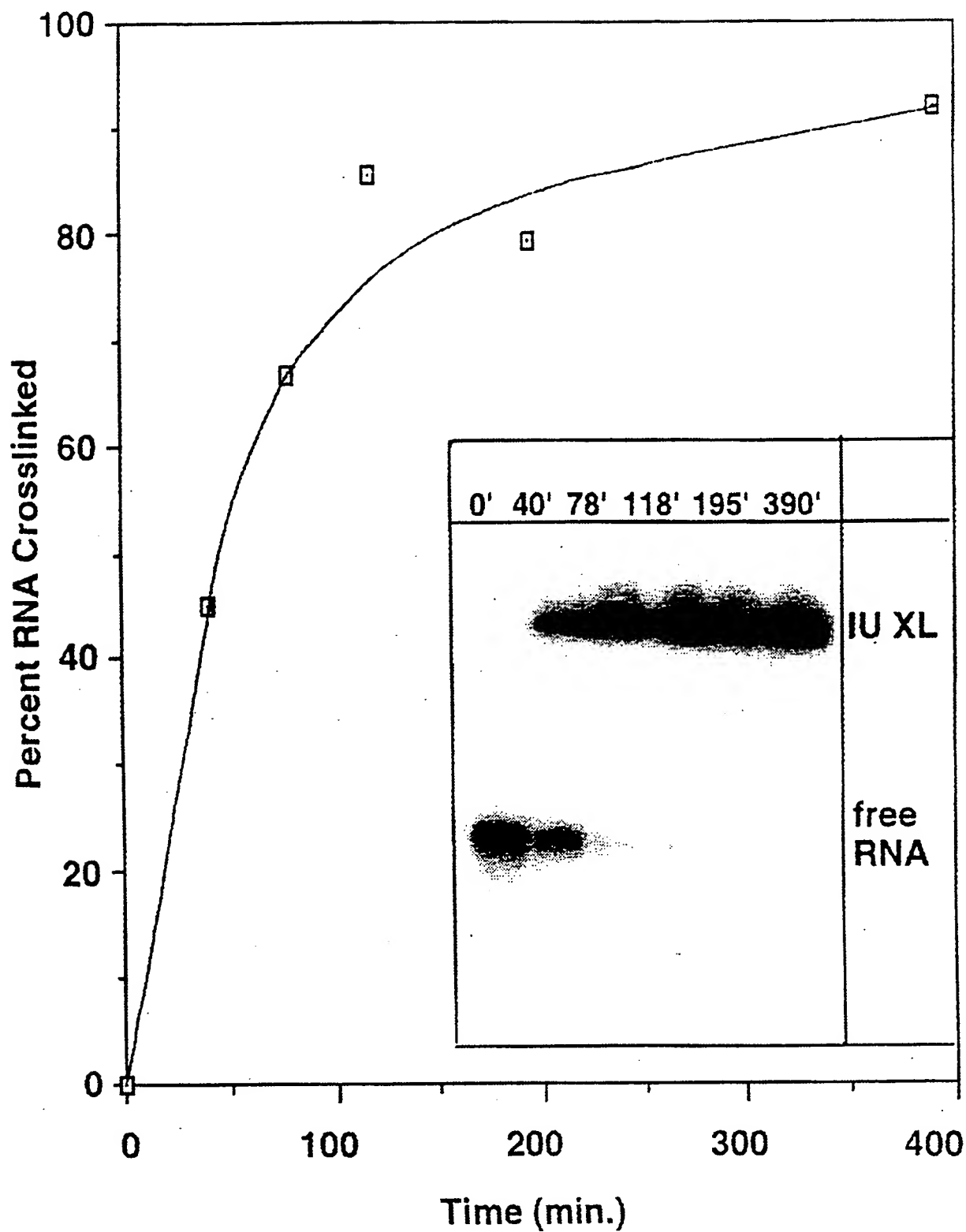


FIG. 9

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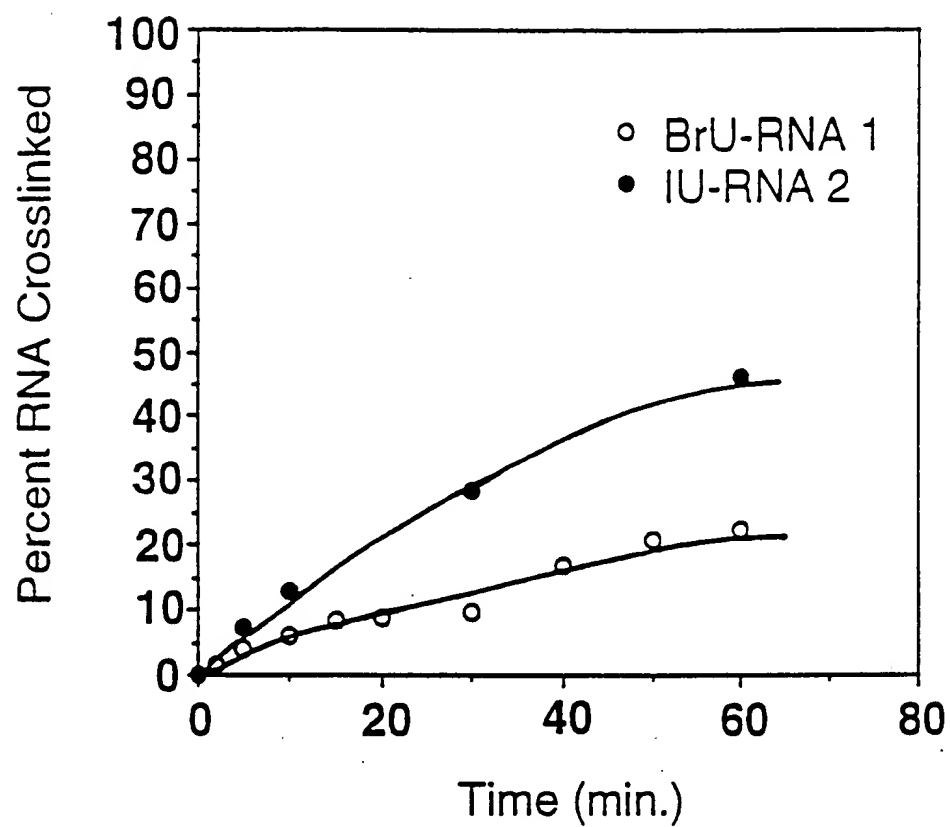


FIG. 10

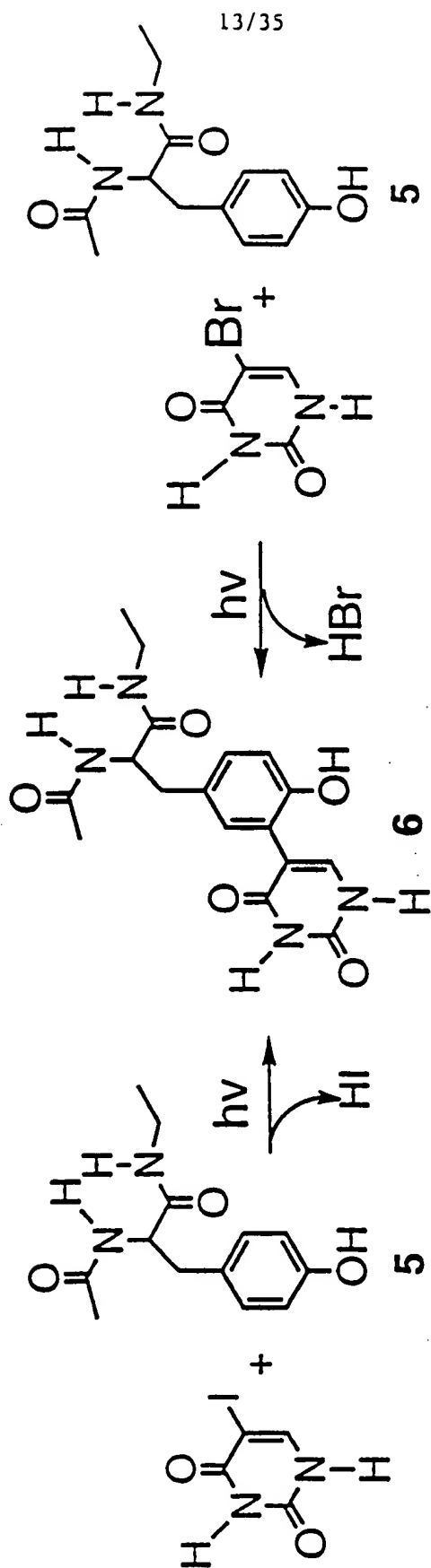


Fig. 11

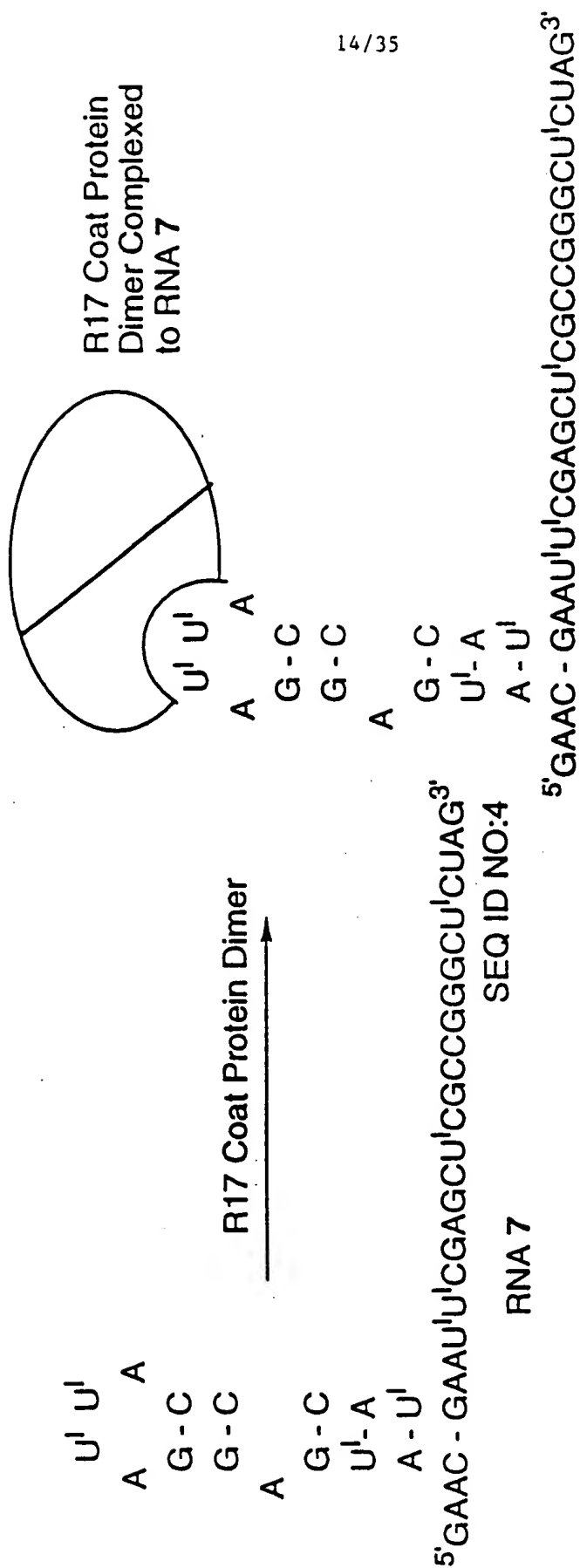


FIG. 12

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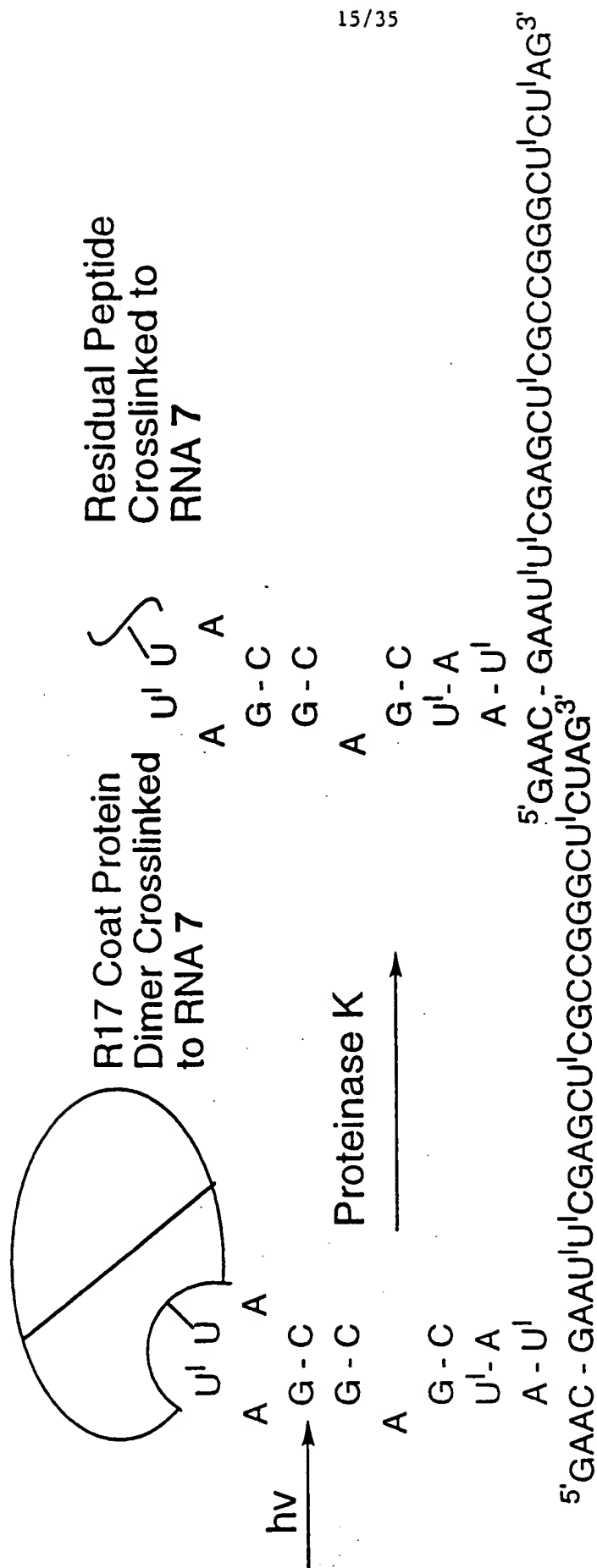


FIG. 12 (CONT'D)

SEQ ID NO:  
 5' GAACAU'GAGGAU'U - ACCCAU'GAAU'U'CGAGCU'CGCCCGGGCU'CU'AG 3' 4  
 3' CGGGCCCGA GA TC 63  
 RNA template  
 DNA primer

NTPs | Reverse Transcriptase

RNA  
 5' GAACAU'GAGGAU'U - ACCCAU'GAAU'U'CGAGCU'CGCCCGGGCU'CU'AG 3' 4  
 3' CTTGTACTCCTA A-TGGGTA CTTA A GCTCGA GCGGGCCCGA GATC 64  
 cDNA

0.2 M  
 NaOH  
 100°C

cDNA  
 3' CTTGTACTCCTA ATGGGTACTTAAGCTCGA GCGGGCCCGA GATC 5' 64

FIG. 13



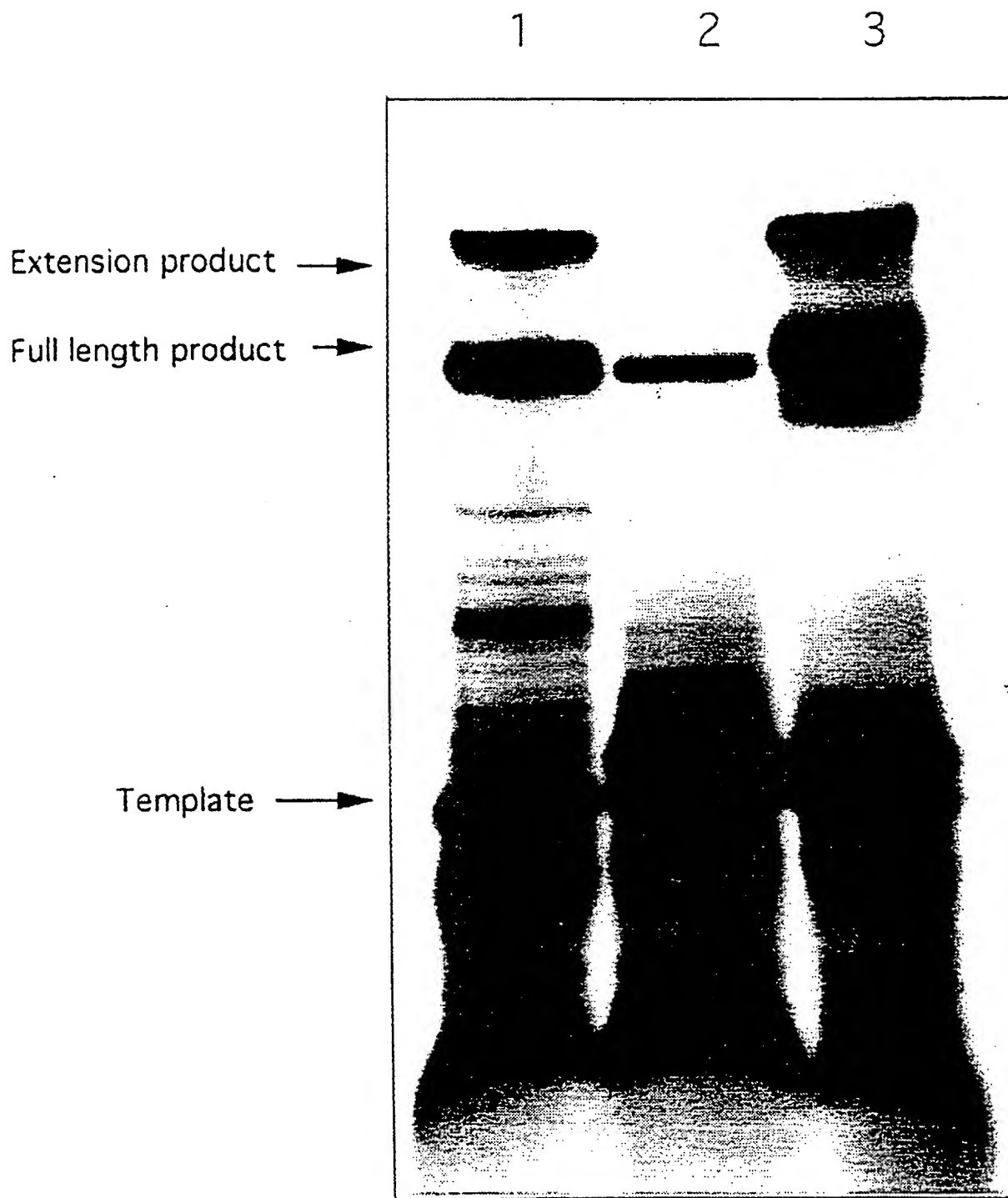
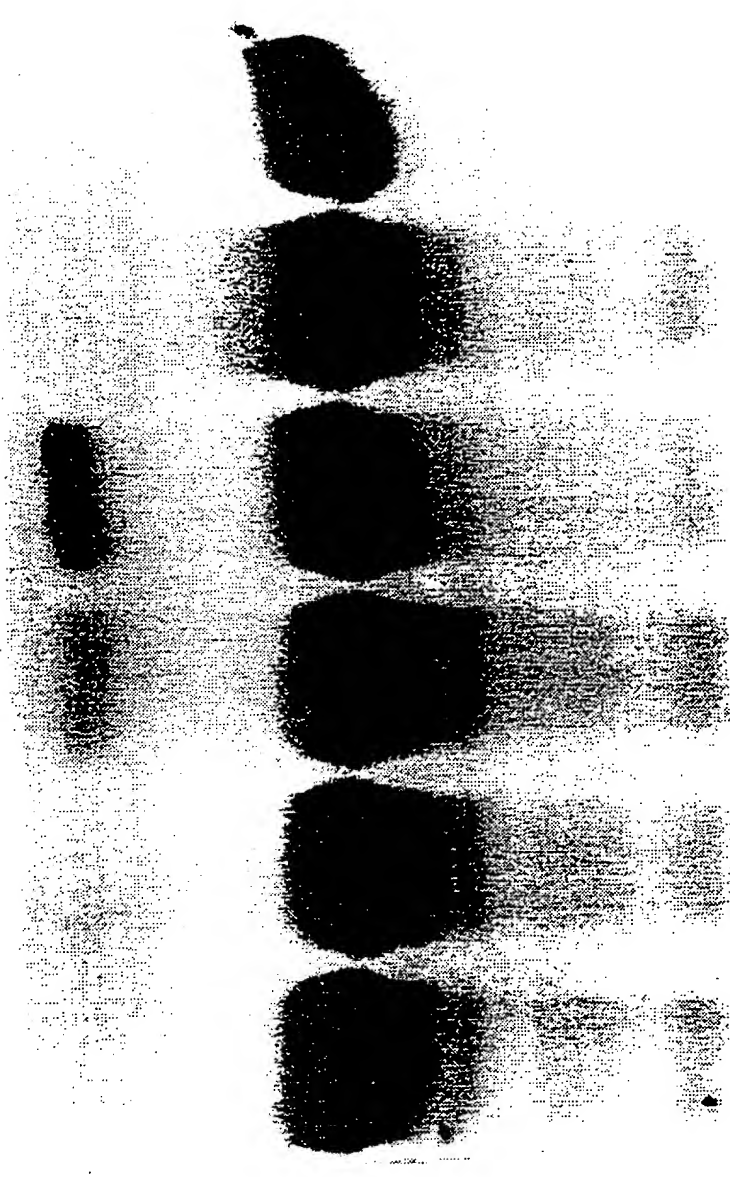


FIG. 14  
SUBSTITUTE SHEET (RULE 26)

008211 8142260

008211-31/22/60

rd1 rd7 rd10 rd13 PK noiU  
rd13 rd13



XL

R

FIG. 15

SEQ ID NO:

5

gguugcauugagaaacacguuugugacucuguaucu

6a

LI-XL

class 1

6

agguacgaauAACAg--acgacUGUUAacggccuaccu

7

uacgggcuuACAagcaccuUGUUAaccuagugccu

8

gaguggcuuACAagcaccuUGUUAaccuaguaccu

9

gugcagaauAACAAcaac-guUGUUAaccuccucucu

10

+

cuguggauuACAggcacaccUGUUAaccguguaccu

11

cuguggauuACAggcacaccUGUUAaccguguaccc

12

agacgaauACAuccacggaUGUUAacgcgcuaagaa

13

-

aagacgaauACAaaacacguuUGUUAacgcaacaccu

14

+

gauuggauuACAggcaccccUGUUAa-ccuaccacu

15

aggaggauuACAaacaaggguUGUUAacccguaacca

16

-

ugaaggauuACAacuaauguUGUUAaccgaugua

17

uugaggauuACAggcacaccUGcUaaccguguaccc

18

auguggcuuACAaguacgcuUGUUAacccaaaacg

19

aggacgaugACAaaacacguuUGUUCacgccaugc

20

+

gacuggcuuACAaaacauuuUGUUAaccguguacca

21

cggcggauuACACgacacacucgUGUUAaccuauac

FIG. 16

SEQ ID NO:

b : 17	<u>gcaucagaugAACAgcacgucUGU</u> <u>Ucacuau</u> <u>gcaccc</u>	-	22
57	<u>gcaucagaugAACAgcacgucUGU</u> <u>Ucacuau</u> <u>gcaccc</u>		23
42	<u>gcaucagaugAACAgcacgucUGU</u> <u>Ucacuau</u> <u>gcaccc</u>		24
3	<u>caguquaugaAACACc</u> <u>cacgugUGU</u> <u>Uuccacu</u> <u>guaccu</u>		25
37	<u>caguquaugaAACAAc</u> <u>acacgugUGU</u> <u>Uuccacu</u> <u>guccu</u>		26
4	<u>gaguquaugaAACAAc</u> <u>acacgugUGU</u> <u>Uuccacu</u> <u>cuccu</u>		27
36	<u>gaguquaugaAACAAc</u> <u>acacgugUGU</u> <u>Uuccacu</u> <u>guccu</u>		28
44	<u>gauuquaugaAACAAc</u> <u>acgugugUGU</u> <u>Uuccacu</u> <u>cuccu</u>		29
7	<u>gauuquaugaAACAAc</u> <u>acacgugUGU</u> <u>Uuccacu</u> <u>guccu</u>		30
51	<u>gauuaggacuuAACAgacaccccUGU</u> <u>Uaaccu</u> <u>accacu</u>		31
c : 15	<u>ugcgacaguuaagaAACAc</u> <u>gauUGU</u> <u>Uuacu</u> <u>guauq</u>		32
47	<u>uacaggccuuaagaAACAc</u> <u>gugugUGU</u> <u>Uaacca</u> <u>accccu</u>		33
14	<u>ucgagcagugugaAACAc</u> <u>gauugUGU</u> <u>Uuccu</u> <u>gcuca</u>		34
62	<u>ugaugccuagagaAACAc</u> <u>auuagUGU</u> <u>Uucccu</u> <u>cugu</u>	-	35
54	<u>acgugcccuagaAACAc</u> <u>aucugaUGU</u> <u>Uucccu</u> <u>cuca</u>		36
56	<u>acccgccucgugaAACAc</u> <u>gcugugaUGU</u> <u>Uucccu</u> <u>cuca</u>		37
48	<u>cggugacguauagaAACAc</u> <u>gugucguUGa</u> <u>UUuccg</u>	-	38
2	<u>gcuugcggaAACAc</u> <u>gugugacgUGU</u> <u>Uucccu</u>		39
10	<u>gcacccuagaAACc</u> <u>gguuagagacGU</u> <u>Uucccu</u>		40

FIG. 16 (CONT'D)

SEQ ID NO:

d : 22 aggaaccuagaAACacagUGUUuccucugcccac - 41  
 26 gccugcauggauuAACacquauqUGUUaaccgacucc 42  
 \*18 ugaAACAcugagaaacacgUGUUucccuugugau - 43

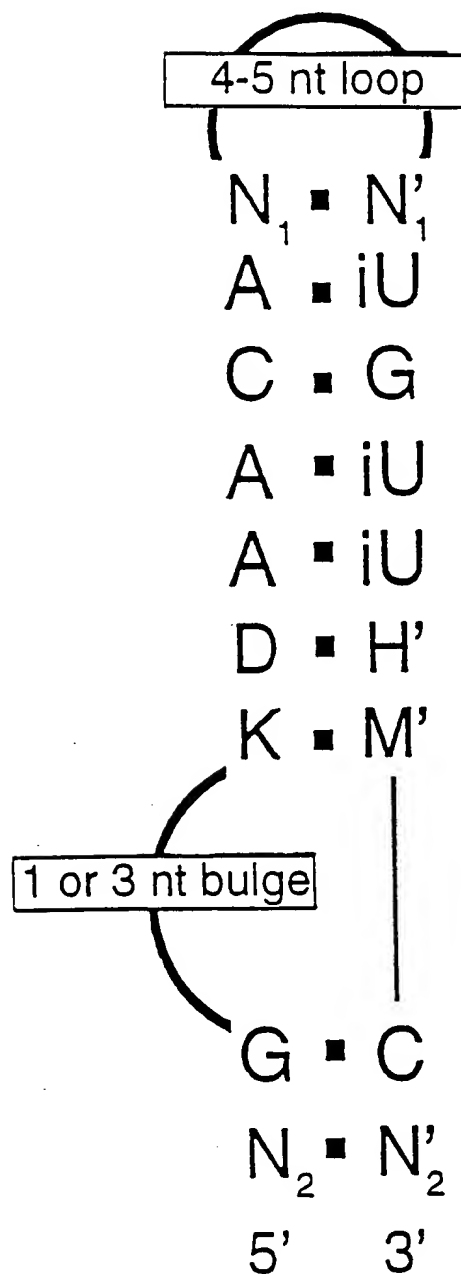
class 2

61 aGGAACCUCAAgccgccccuagaacacucggcaccu 44  
 8 aGGAACCUCAAgaaagccccugaaacacucgaagccu - 45  
 53 aGGAACCUCAAgaaacccccugaaacacucauuaccg - 46  
 39 aGGAACCUCAAgaaauccggaacgacaacccuacaccu 47  
 59 aGGAACCUCAAgaaacccccgccacggaccccaacca 48  
 35 gGGAACCUCAAuaucaucgcgcacgcauacucggcaucu 49  
 29 gGGAACCUCAAgagaccccgacaggauacucggac 50  
 46 aaguGGAACCUCAAucccguaaagaagauccuguaaccu 51  
 9 augugcauagagauaguacauauGGAACCUCAGuagag - 52  
 5 ucaugcauaggcauaggcagauGGAACCUCAGuagcc 53  
 31 augugcaacaaggcgacggauaaGGAACCUCAAGuagu - 54  
 19 gaguacagcacgcaacacgcuacggGGAACCUCAAGuagu 55

FIG. 16 (CONT'D)

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## class 1 consensus

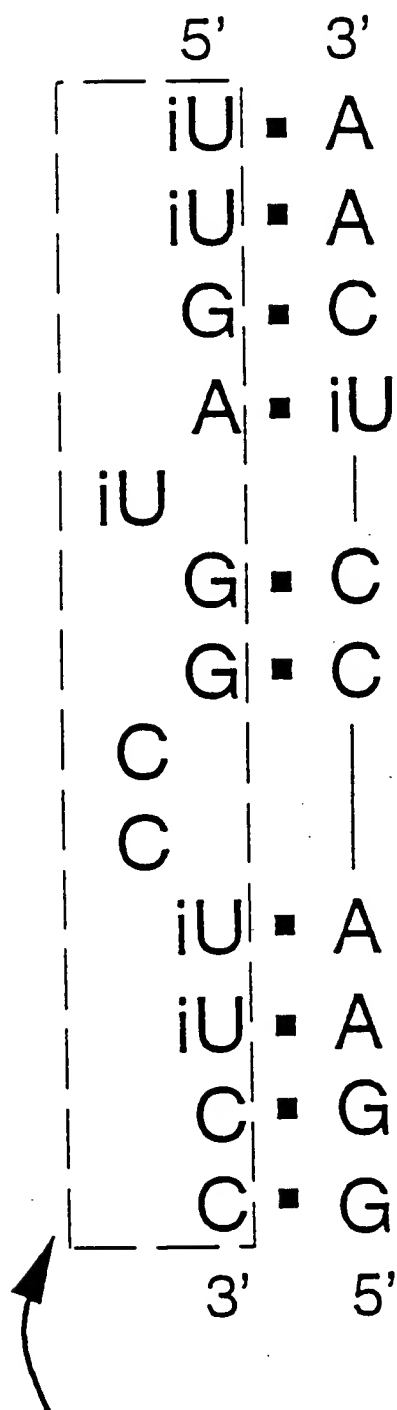


SEQ ID NO:56

FIG. 17

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## class 2 consensus

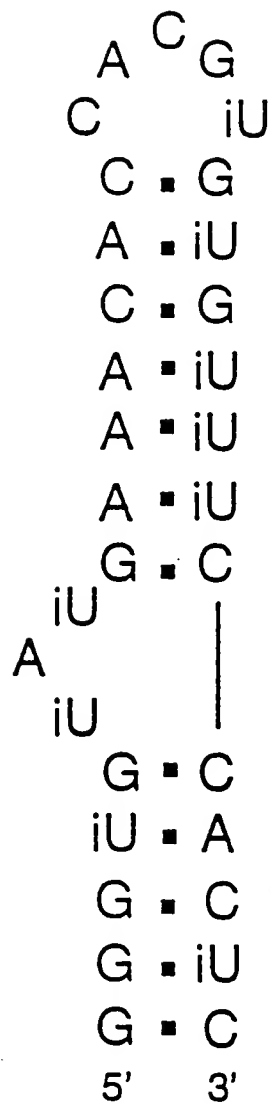


5' fixed region

SEQ ID NO:57

FIG. 17 (CONT'D)

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trunc2

SEQ ID NO:58

FIG. 18A

09723718.11300



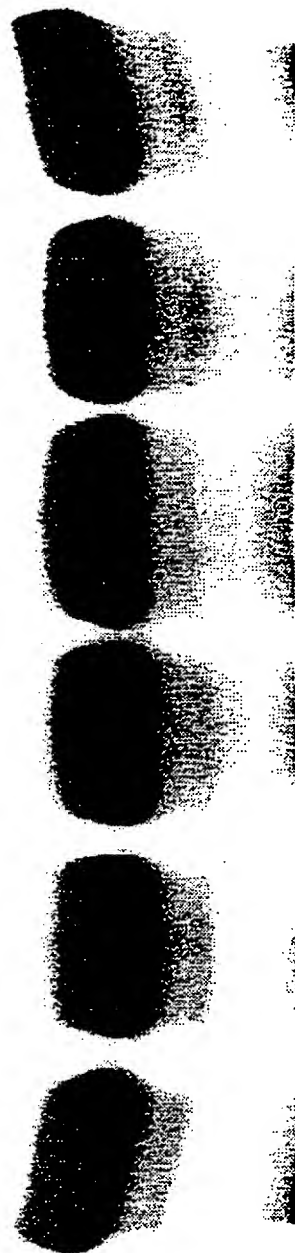
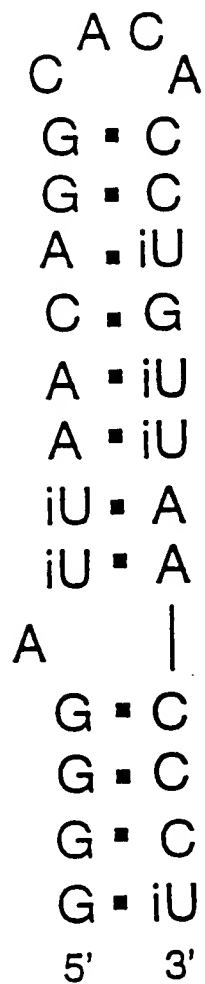


FIG. 18B

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trunc24

SEQ ID NO:59

FIG. 19A

t24	t24/	t24/	t24/	t24/
	Rev1	Rev1	Rev	Tat
		PK	2	

PK 2

100

↑  
R

FIG. 19B

500 nM 100 nM 50 nM  
1 µg 200 ng 100 ng

HIV-1 Rev

-

nuclear extract

+

+

+

+

XL-



RNA-



FIG. 20

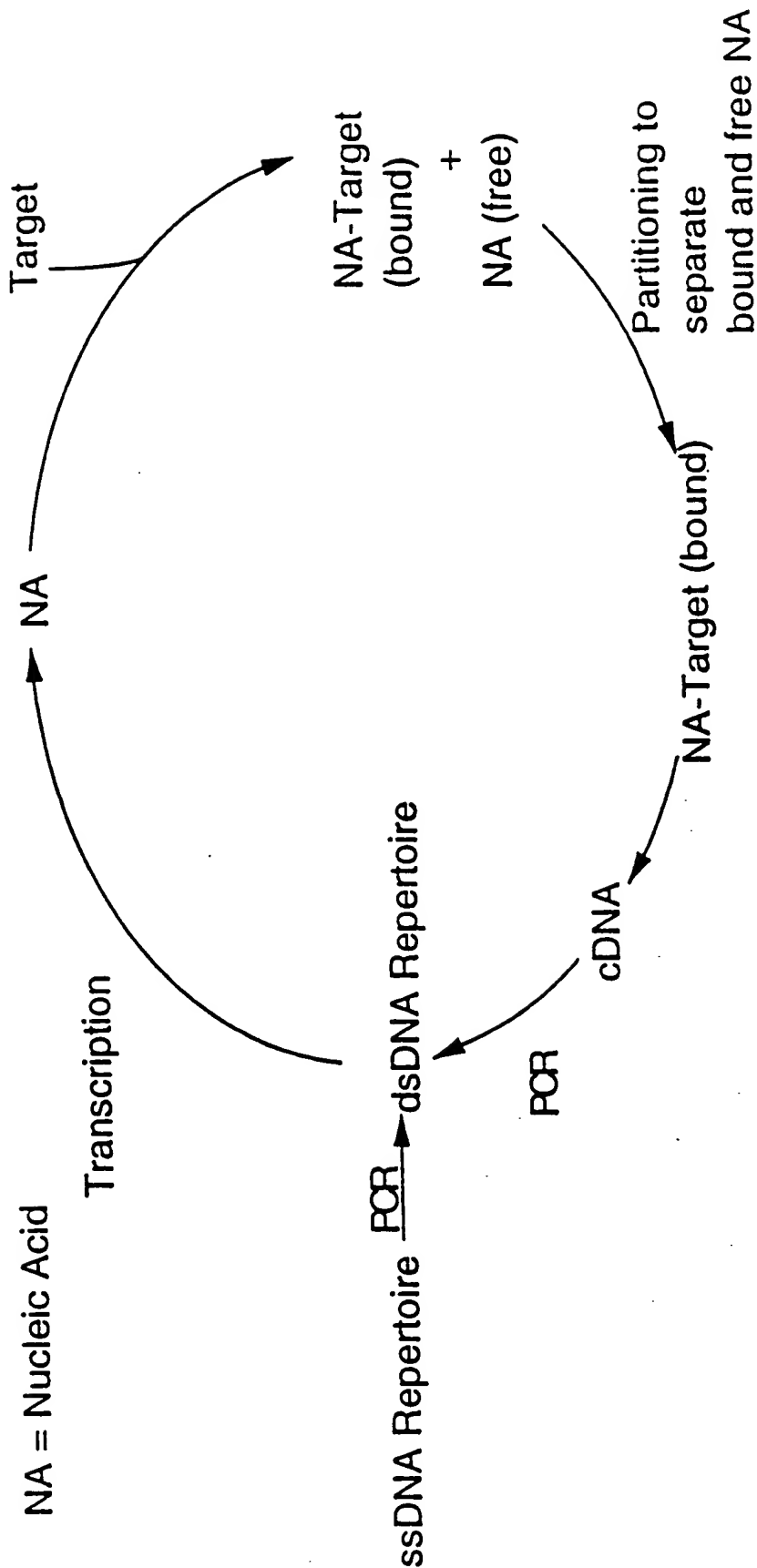


FIG. 21

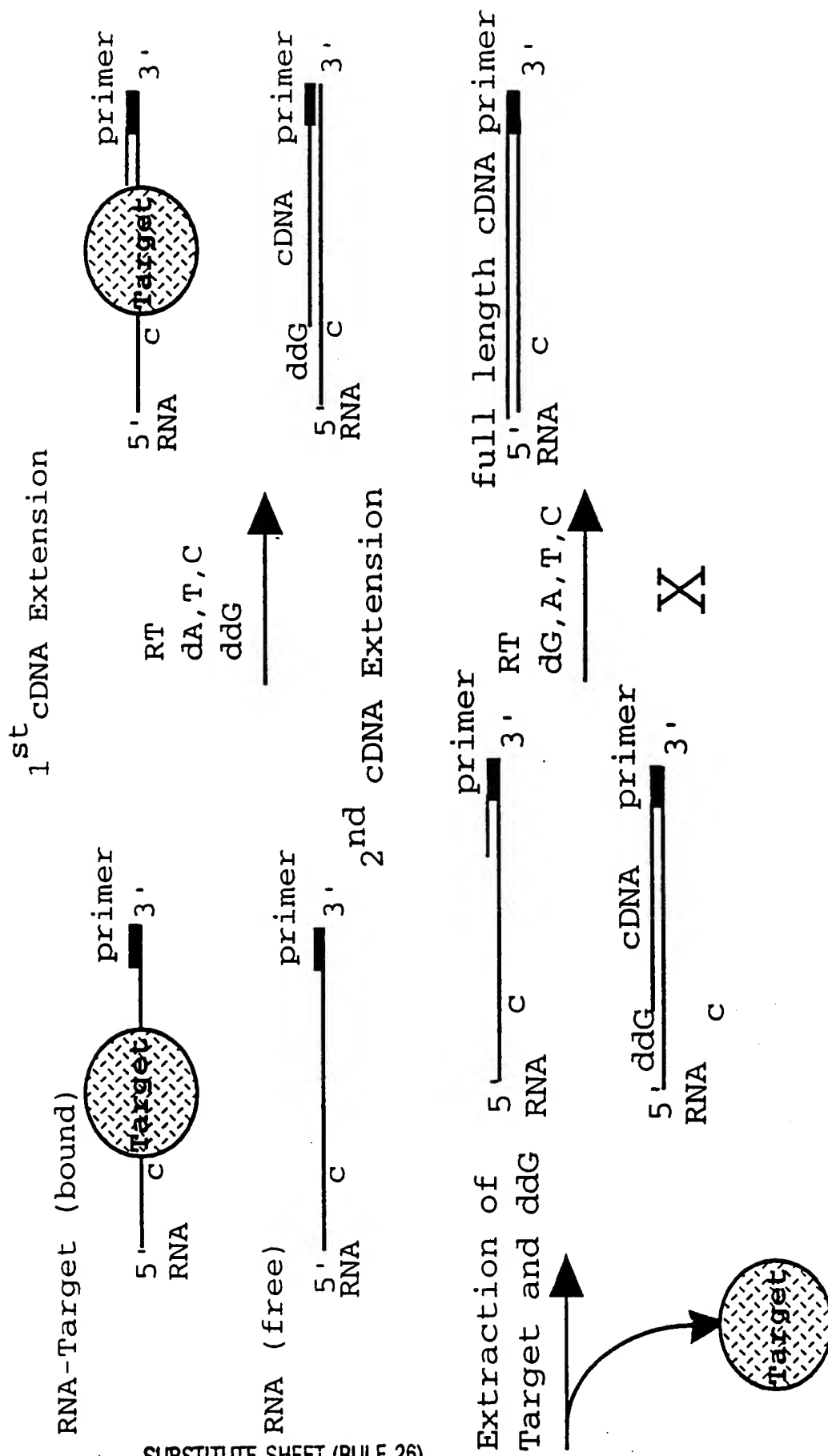
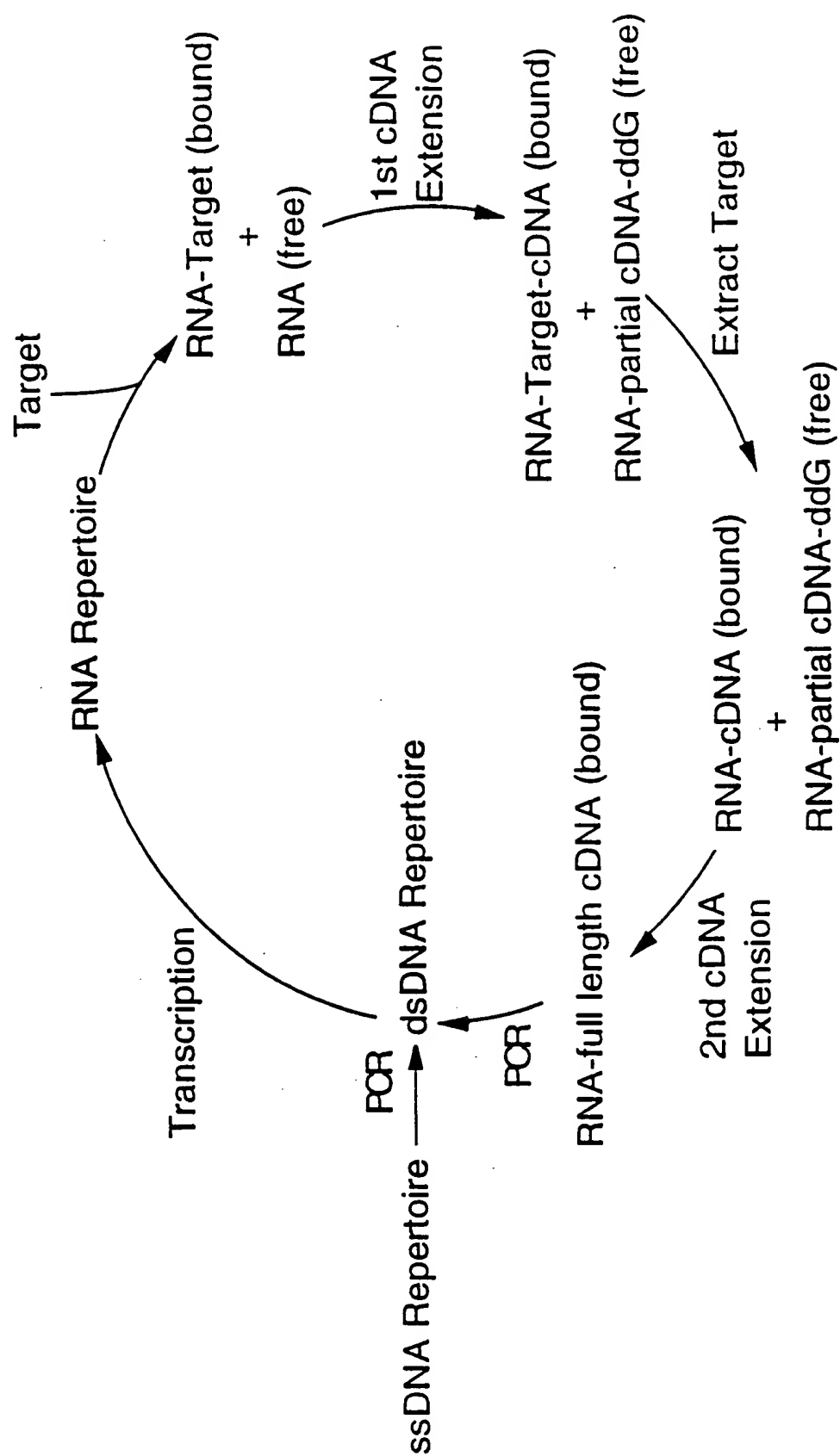
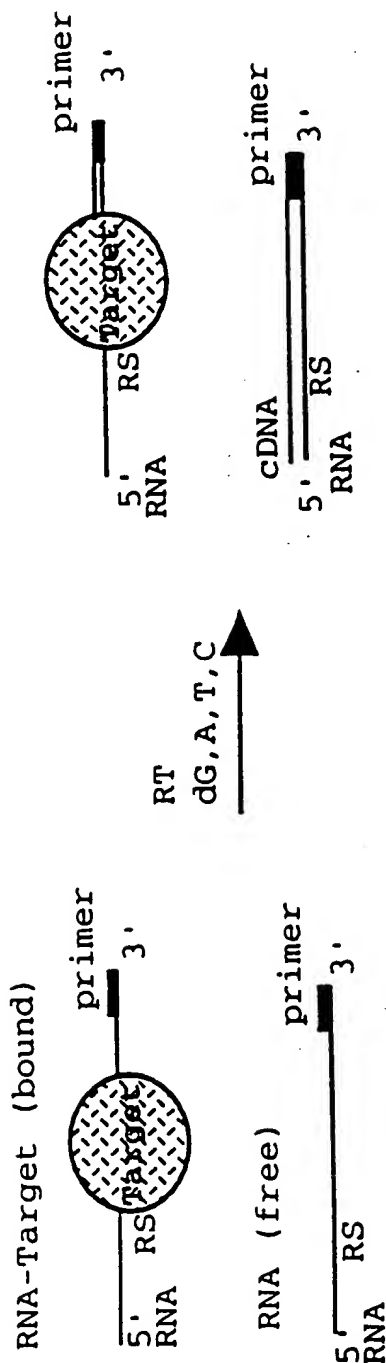


FIG. 22



**Figure 23**

# 1<sup>st</sup> cDNA Extension



# 2<sup>nd</sup> cDNA Extension

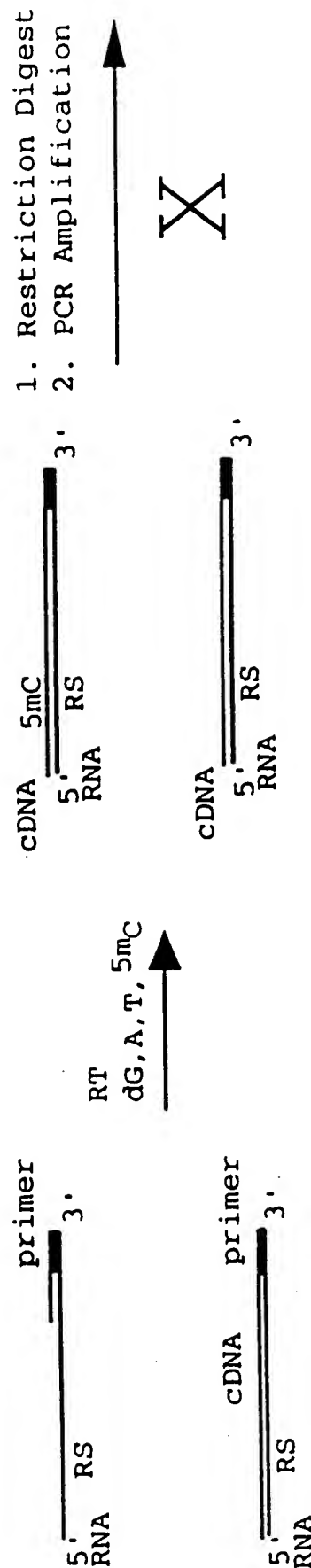


Figure 24



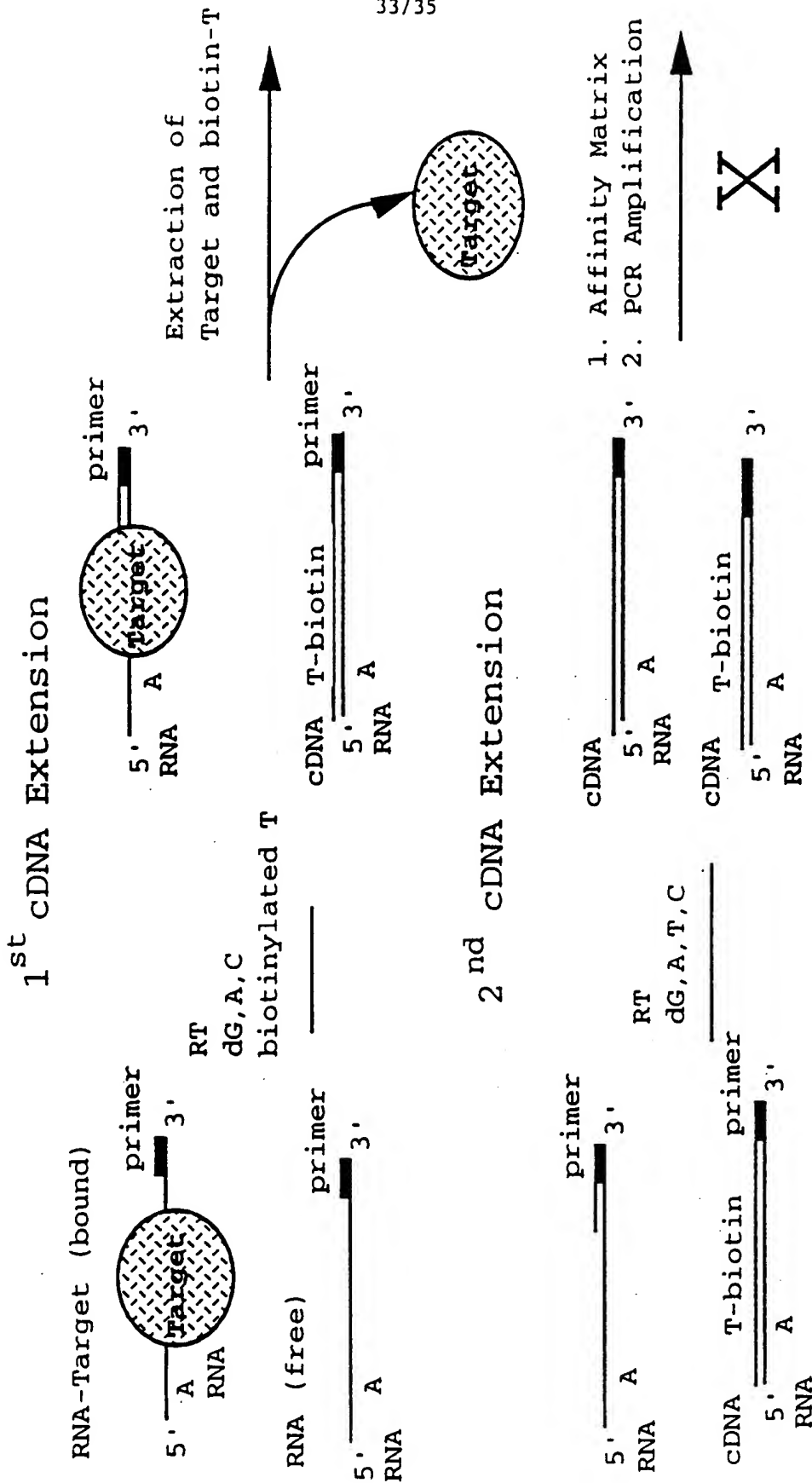


FIG. 25

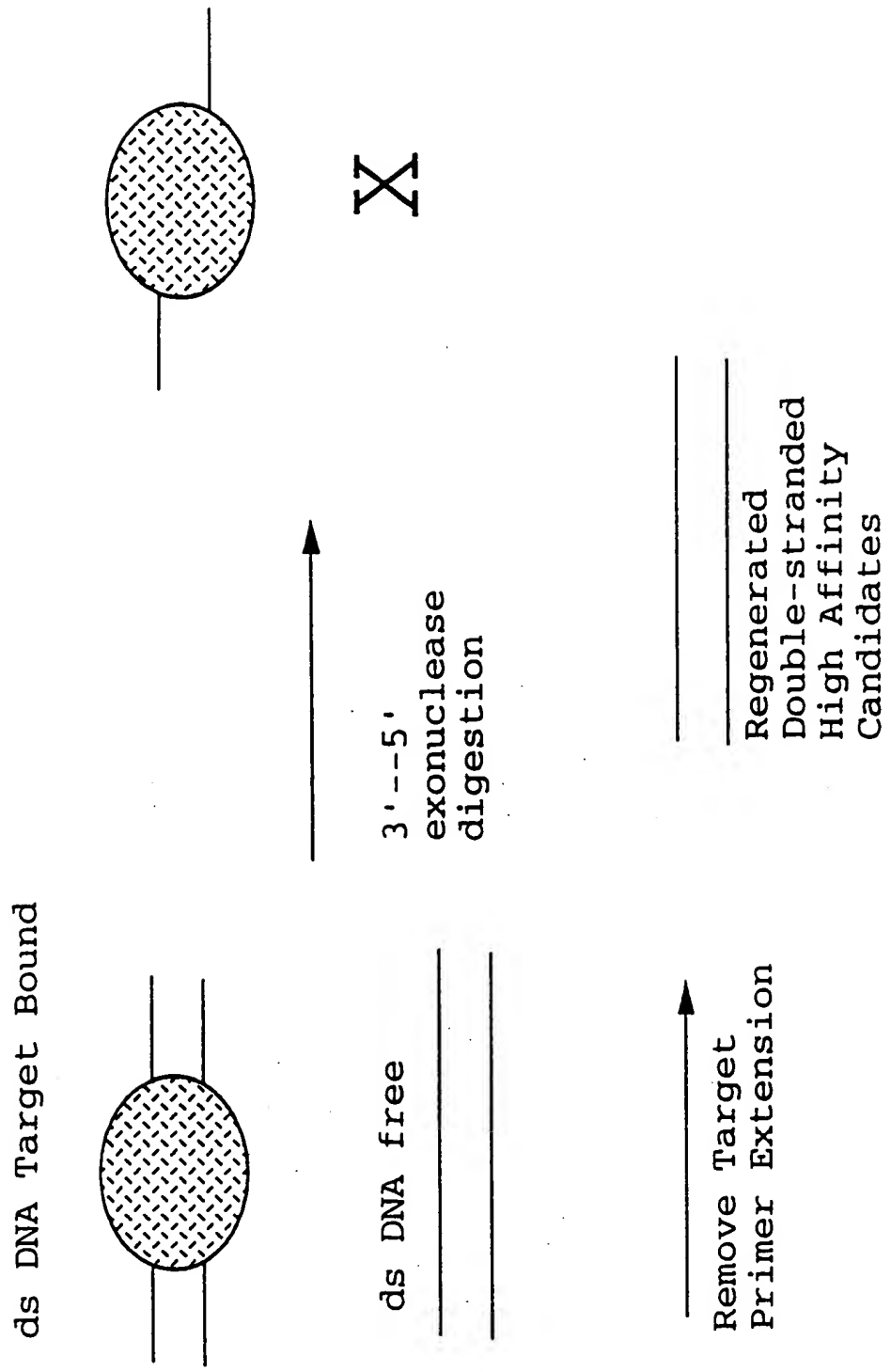


FIG. 26

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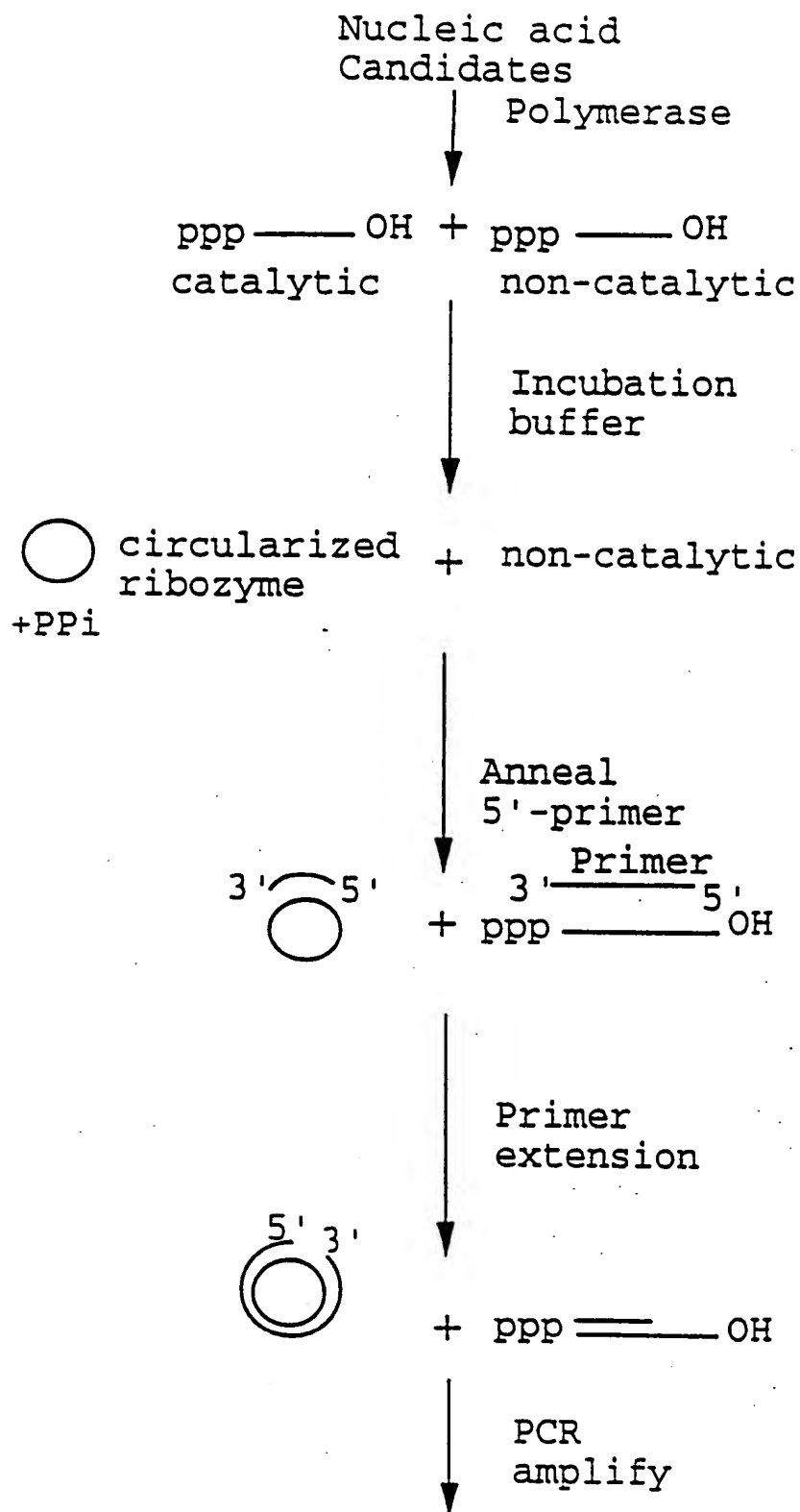


FIG. 27